

Appl. No. 10/615,167
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Reply to Office Action of December 22, 2006

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REMARKS

By the above amendments, applicants have, inter alia, added a new claim 7. The subject matter of claim 7 is based on the description in lines 15-22 on page 5 of the specification and the corresponding drawing(s). Applicants assert that no new matter is added.

Applicants respectfully submit that all the pending claims are now placed in position for allowance. Detailed reasons for allowance are as follows:

Specification

The abstract of the disclosure is objected to because VoIP (Voice over Internet Protocol) is not spelled out when it first appears as an acronym.

The disclosure is objected to because of the following informalities:

- a. On page 1, line 8, all words should be capitalized when spelling out "Plain Old Telephone Service".
- b. On page 1, lines 9 and 16, all words should be capitalized when spelling out "Public Switched Telephone Network".

In response to the objections, applicants have: added "Voice-over-Internet Protocol" before "VoIP" in the abstract; replaced the term "Plain Old telephone service" with the term "Plain Old Telephone Service" in line 8 on page 1 of the specification; replaced the term "public switched telephone networking" with the term "Public Switched Telephone Network" in line 9 on page 1 of the specification; and replaced the term "public switched telephone network" with the term "Public Switched Telephone Network" in line 16 on page 1 of the specification.

Thus, it is believed that the objections are now overcome.

Claim Rejections under 35 U.S.C. §103

Claims 1, 2 and 5 are rejected under 35 U.S.C. §103(a) as being unpatentable over Jones et al. (U.S. Patent No. 6,404,764 B1) in view of Wu et al. (U.S. Patent No. 7,123,606 B2).

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Claims 3 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Jones et al. (U.S. Patent No. 6,404,764 B1) in view of Wu et al. (U.S. Patent No. 7,123,606 B2), as applied to claim 2 above, and further in view of Schornack et al. (U.S. Patent No. 7,089,034 B1).

Claim 6 is rejected under 35 U.S.C. §103(a) as being unpatentable over Jones et al. (U.S. Patent No. 6,404,764 B1) in view of Wu et al. (U.S. Patent No. 7,123,606 B2), as applied to claim 1 above, and further in view of Dunlap (U.S. Patent Application Publication No. 2002/0114439 A1).

In response

With regard to claims 1, 2 and 5:

Claim 1 recites that a Voice-over-Internet Protocol (VoIP) device includes a subscriber line interface circuit, a processor, and a Dual-Tone Multi-Frequency (DTMF) coupling circuit. The processor determines whether a transmission from a telephone through the subscriber line interface circuit is a Public Switched Telephone Network (PSTN) phone number or a VoIP phone number, and instructs the subscriber line interface circuit to generate a DTMF redial number when the transmission is a PSTN phone number. The DTMF coupling circuit receives the DTMF redial number from the subscriber line interface circuit when the transmission is a PSTN phone number, and routes the DTMF redial number to the PSTN.

Applicants would like to emphasize that both Jones et al. and Wu et al. fail to teach or suggest that "the processor instructs the subscriber line interface circuit to generate a DTMF redial number when the transmission is a PSTN phone number", as recited in claim 1. In particular, Jones et al. essentially disclose that a network premises gateway 10 includes a plain old telephone service (POTS) interface 40, a DTMF detection and call progress generator 52, and a telephony crossbar 42 (figure 5; column 4, lines 4-22 and 23-31; and column 9, lines 27-65). The network premises gateway 10 enters a POTS mode and transmits a sequence of signals to the PSTN when the DTMF detection and call progress generator 52 detects a particular sequence of predetermined signals. The telephony crossbar 42 routes telephony calls to the PSTN by sending digitally encoded audio signals to the POTS interface 40. Thus, Jones et al. fail to teach

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or suggest that "the processor instructs the subscriber line interface circuit to generate a DTMF redial number when the transmission is a PSTN phone number", as recited in claim 1.

Wu et al. disclose a VoIP device capable of auto-selectively dialing up a PSTN or Internet phone; but fail to teach or suggest that "the processor instructs the subscriber line interface circuit to generate a DTMF redial number when the transmission is a PSTN phone number", as recited in claim 1. Further, any combination of Jones et al. and Wu et al. fails to teach or suggest that "the processor instructs the subscriber line interface circuit to generate a DTMF redial number" "when the transmission is a PSTN phone number", as recited in claim 1.

Further, Examiner has characterized the POTS interface 40 and the DTMF detection and call progress generator 52 of Jones et al. as being the equivalent of the subscriber line interface circuit and the processor of claim 1, respectively. Applicant respectfully traverses such characterization. In fact, Jones et al. fail to teach or suggest that the DTMF detection and call progress generator 52 instructs the POTS interface 40 to generate a DTMF redial number when the transmission is a PSTN phone number. Therefore the subscriber line interface circuit and the processor of claim 1 are submitted to be patentably different from the POTS interface 40 and the DTMF detection and call progress generator 52 of Jones et al. respectively. Moreover, Wu et al. do not provide any teaching that can remedy the above-described shortfalls in the teaching of Jones. That is, the combination of Jones et al. and Wu et al. fails to teach or suggest that Jones et al.'s DTMF detection and call progress generator 52 instructs the POTS interface 40 to generate a DTMF redial number when the transmission is a PSTN phone number.

For at least the above reasons, it is submitted that Jones et al. and Wu et al. do not provide any or sufficient teaching or suggestion for one of ordinary skill in the art that they could be combined and lead to providing the VoIP device of claim 1. The references taken as a whole fall short of teaching or suggesting the claimed VoIP device. That is, the VoIP device of claim 1 is unobvious and patentable over Jones et al. in view of Wu et al. Reconsideration and removal of the rejection of claim 1 under 35 U.S.C. §103(a), and allowance of the claim, are respectfully requested.

Claims 2 and 5 are directly and indirectly dependent on claim 1, and incorporate more

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features therein respectively. Therefore claims 2 and 5 should also be allowable.

With regard to claim 3:

Firstly, claim 3 is indirectly dependent on claim 1. That is, all the limitations of claim 1 are incorporated in claim 3. Applicants refer to and rely on the above assertions regarding the patentability of claim 1 under 35 U.S.C. §103 over Jones et al. in view of Wu et al. Schornack et al. do not provide any additional teaching that can remedy the shortcomings of Jones et al. and Wu et al. In particular, Schornack et al. fail to teach or suggest that "the processor instructs the subscriber line interface circuit to generate a DTMF redial number when the transmission is a PSTN phone number", as recited in claim 1. Therefore claim 3 is unobvious and patentable over Jones et al. in view of Wu et al. and further in view of Schornack et al.

Secondly, if further argument is needed, the field of the invention of Schornack et al. is very different from those of Jones et al. and Wu et al. The inventions of Jones et al. and Wu et al. are both classified in class 370, whereas the invention of Schornack et al. is classified in class 455. In addition, the objective of Schornack et al. is different from those of Jones et al. and Wu et al. The objective of Jones et al. is to provide a system and method that enable users to place and receive Internet-based calls via the user's existing telephone equipment operating in its current fashion. The objective of Wu et al. is to provide a VoIP device capable of auto-selectively dialing up a PSTN or Internet phone. In contrast, the objective of Schornack et al. is to allow a facility, normally wired for a single telephone line from a telephone company, to become a two-line facility, with the second line coupled to a wireless communication system and remain fully compatible with all FCC Part 68 devices. Accordingly, it could not reasonably be expected for one having ordinary skill in the art to contemplate combining Jones et al. and Wu et al. with Schornack et al. to make the VoIP device of claim 3.

Thirdly, if still further argument is needed, the DTMF detection circuit 420 of Schornack et al. is very different from the DTMF coupling circuit of claim 3. In particular, the DTMF coupling circuit of claim 3 receives the DTMF redial number from the subscriber line interface circuit when the transmission is determined to be a PSTN phone number, and routes the DTMF

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redial number to the PSTN. However, the DTMF detection circuit 420 of Schornack et al. couples a DTMF signal from a communication path 2 for processing by a microprocessor U3 (figure 6E and column 13, lines 16-31). Therefore, although the DTMF detection circuit 420 of Schornack et al. includes a capacitor 22, Schornack et al. fail to teach or suggest the DTMF coupling circuit of claim 3 having a capacitor as the first coupling device thereof.

For at least the above reasons, the VoIP device of dependent claim 3 is unobvious and patentable over Jones et al. in view of Wu et al. and further in view of Schornack et al. Reconsideration and removal of the rejection of claim 3 under 35 U.S.C. §103(a), and allowance of the claim, are respectfully requested.

With regard to claim 4:

Firstly, claim 4 is indirectly dependent on claim 1. That is, all the limitations of claim 1 are incorporated in claim 4. Applicants refer to and rely on the above assertions regarding the patentability of claim 1 under 35 U.S.C. §103 over Jones et al. in view of Wu et al. Schornack et al. do not provide any additional teaching that can remedy the shortcomings of Jones et al. and Wu et al. In particular, Schornack et al. fail to teach or suggest that "the processor instructs the subscriber line interface circuit to generate a DTMF redial number when the transmission is a PSTN phone number", as recited in claim 1. Therefore claim 4 is unobvious and patentable over Jones et al. in view of Wu et al. and further in view of Schornack et al.

Secondly, if further argument is needed, the field of the invention of Schornack et al. is very different from those of Jones et al. and Wu et al. The inventions of Jones et al. and Wu et al. are both classified in class 370, whereas the invention of Schornack et al. is classified in class 455. In addition, the objective of Schornack et al. is different from those of Jones et al. and Wu et al. The objective of Jones et al. is to provide a system and method that enable users to place and receive Internet-based calls via the user's existing telephone equipment operating in its current fashion. The objective of Wu et al. is to provide a VoIP device capable of auto-selectively dialing up a PSTN or Internet phone. In contrast, the objective of Schornack et al. is to allow a facility, normally wired for a single telephone line from a telephone company, to become a

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two-line facility, with the second line coupled to a wireless communication system and remain fully compatible with all FCC Part 68 devices. Accordingly, it could not reasonably be expected for one having ordinary skill in the art to contemplate combining Jones et al. and Wu et al. with Schornack et al. to make the VoIP device of claim 4.

Thirdly, if still further argument is needed, the DTMF detection circuit 420 of Schornack et al. is very different from the DTMF coupling circuit of claim 4. In particular, the DTMF coupling circuit of claim 4 receives the DTMF redial number from the subscriber line interface circuit when the transmission is determined as a PSTN phone number, and routes the DTMF redial number to the PSTN. However, the DTMF detection circuit 420 of Schornack et al. couples a DTMF signal from a communication path 2 for processing by a microprocessor U3 (figure 6E and column 13, lines 16-31). Therefore, although the DTMF detection circuit 420 of Schornack et al. includes a transformer 23, Schornack et al. fail to teach or suggest the DTMF coupling circuit of claim 4 having a transformer as the second coupling device thereof.

For at least the above reasons, the VoIP device of dependent claim 4 is unobvious and patentable over Jones et al. in view of Wu et al. and further in view of Schornack et al. Reconsideration and removal of the rejection of claim 4 under 35 U.S.C. §103(a), and allowance of the claim, are respectfully requested.

With regard to claim 6:

Claim 6 is directly dependent on claim 1. That is, all the limitations of claim 1 are incorporated in claim 6. In addition, Dunlap also fails to teach or suggest "the processor instructs the subscriber line interface circuit to generate a DTMF redial number when the transmission is a PSTN phone number", as recited in claim 1. Therefore the VoIP device of dependent claim 6 is unobvious and patentable over Jones et al. in view of Wu et al. and further in view of Dunlap. Reconsideration and removal of the rejection of claim 6 under 35 U.S.C. §103(a), and allowance of the claim, are respectfully requested.

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With regard to newly-added claim 7:

Firstly, claim 7 is directly dependent on claim 1. That is, all the limitations of claim 1 are incorporated in claim 7. Applicants refer to and rely on the above assertions regarding the patentability of claim 1 under 35 U.S.C. §103 over Jones et al. in view of Wu et al. Therefore, claim 7 is also believed to represent patentable subject matter.

Secondly, if further argument is needed, applicants would like to emphasize that the processor of claim 7 is patentably different from the DTMF detection and call progress generator 52 of Jones et al. In particular, the processor of claim 7 determines the transmission from the subscriber line interface circuit as a PSTN phone number when the transmission is a common telephone number, and determines the transmission from the subscriber line interface circuit as a VoIP phone number when the transmission is an important or emergency telephone number. However, the DTMF detection and call progress generator 52 of Jones et al. determines whether a call is transmitted to the Internet or the PSTN according to whether a particular sequence of predetermined signals is detected. The call is transmitted to the Internet if the sequence of predetermined signals is detected, or to the PSTN if the sequence of predetermined signals is not detected. Wu et al. also fail to teach or suggest the processor of claim 7. It is submitted that any combination of Jones et al. and Wu et al. also fails to teach or suggest the processor of claim 7.

For at least the above reasons, it is submitted that Jones et al. and Wu et al. do not provide any or sufficient teaching or suggestion for one of ordinary skill in the art that they could be combined and lead to providing the VoIP device of claim 7. The references taken as a whole fall short of teaching or suggesting the claimed VoIP device. That is, the VoIP device of claim 7 is unobvious and patentable over Jones et al. in view of Wu et al. Allowance of claim 7 is respectfully requested.

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CONCLUSION

Applicants respectfully submit that the foregoing Amendments and Response place this application in condition for allowance. If Examiner believes that there are any issues that can be resolved by a telephone conference, or that there are any informalities that can be corrected by an Examiner's amendment, please call the undersigned at 714.626.1240.

Respectfully submitted,

Yeh et al.

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